

The step 174 is preferably implemented by graphics software such as QUICKDRAW from Apple Computer, Inc. of Cupertino, Calif. A description of the QUICKDRAW graphics software is found in the book *Inside Macintosh, Volumes I, II, and III*, by C. Rose et al., Addison-Wesley Publishing Company, Inc., July 1988. With such graphics software, a header bar, for example, can be drawn by simply specifying the coordinates of the beginning and the end of the bar, along with the thickness of the bar, its pattern, etc.

The process 174 begins at 178 and initializes variables in a step 180. Two of these variables include the counter *i* which is set to the current note number *C*, and the variable *Y* which is set to the negative of the offset *o*. Next, in step 182, the note *N(i)* is drawn from the point *Y*, i.e., from the current offset position. This step 182 includes the sub-steps of drawing the header bar *B(i)*, the date *D(i)*, the note number *i*, the text object *TEXT(i)*, the graphic object *GRAPHIC(i)*, the data object *DATA(i)*, etc. This will result in an image of part or all of note *N(i)* being displayed on the screen 38. Next, in a step 184, the variable *Y* is increased by the height of note *N(i)* i.e.,  $Y=Y+H(i)$ . In a decision step 186, the value of *Y* is compared to *L*, the length of the screen 38. If *Y* is greater than *L*, then the process 174 is completed as is indicated at 188. Otherwise, the counter *i* is incremented by 1 in a step 190 and steps 182, 184 and 186 are repeated. Essentially, the decision step 186 determines whether part or all of the next note will fit on the screen, and if it will, the CPU 12 causes that partial or complete note to be drawn on the screen. Steps 182-190 are repeated until all visible notes are displayed on the screen 38.

In FIG. 14, the step 84 of processing the up-scroll is illustrated in greater detail. The process begins at 192, and a decision is made as to whether the current note number *C* and the current offset *o* are both equal to zero in a step 194. If they are, the header bar *B(1)* of note *N(1)* is at the top of the screen 38 and no further up-scrolling is possible as indicated at 196. Otherwise, step 198 determines whether the offset is equal to zero, and if it is not then the value of the offset *o* is reduced by the length of the screen *L* in a step 199 so that another screen-full of images can be displayed. If the offset *o* is equal to zero, the current note number *C* is decremented by 1 in a step 200, and in a step 202 it is determined whether the height *H(C)* of note *N(C)* is less than *L*, the length of the screen 38. If it is less, the entire note *N(C)* will fit on the screen 38. If *H(C)* is not less than *L*, the entire note *N(C)* will not fit on the screen 38 and a new offset *o* is calculated as indicated in step 204. This new offset *o* is equal to:

$$o=H(C)-\{H(C) \text{ MOD } L\}$$

where  $\{H(C) \text{ MOD } L\}$  is the modulus of *H(C)* and *L*, i.e. it is equal to the remainder of the quotient  $H(C)/L$ . Finally, after steps 199 or 204 are completed or if the decision step 202 is true, all visible notes are drawn in step 174 before the completion of the process at 196.

The process down-scroll step 88 is illustrated in greater detail in FIG. 15. The process starts at 206, and the height *H(C)* of the current note *C* is compared with the length *L* of screen 38 in a step 208. If the height is less than the screen length, then the offset *o* is increased by the length of the screen *L* in a step 210. Next, in step 212, the offset is compared with the height *H(C)* of the current note and, if it is less than that height, all visible notes are drawn in a step 174 and the process is completed as indicated at 214. Otherwise, if step 212 determines that the offset *o* is greater than the height *H(C)* of the current note, file current note *C*

is incremented by 1 and the offset *o* is set to zero in a step 216.

While this invention has been described in terms of several preferred embodiments, it is contemplated that alterations, modifications and permutations thereof will become apparent to those skilled in the art upon a reading of the specification and study of the drawings. Furthermore, certain terminology has been used for the purposes of descriptive clarity, and not to limit of the present invention. For example, while the creation of new notes has been described as the division of previous notes, it is also possible to characterize note creation as adding additional notes to one or more previous notes. It is therefore intended that the following appended claims include all such alterations, modifications and permutations as fall within the true spirit and scope of the present invention.

What is claimed is:

1. A method for manipulating notes on the screen of a computer display comprising:

generating an initial note area on a screen of a computer display;

dividing said initial note area into a plurality of note areas in response to at least one division gesture implemented by moving a pointer across the width of the screen such that a left edge of the division gesture is within a first defined distance of a left side of said computer display and a right edge of the division gesture is within a second defined distance of a right side of said computer display, wherein the division gesture is made in a horizontal motion having a slope of less than a predefined slope value, and wherein each division gesture creates divider indicia in the form of a header bar said screen which visually separates an immediately preceding note-area and an immediately having a slope of less than a predefined slope value, and wherein each division gesture creates divider indicia in the form of a header bar on said screen which visually separates an immediately preceding note area and an immediately subsequent note area, the header bar being associated with the immediately subsequent note area, the header bar including a sizing button, the sizing button being operative to adjust a height of the immediately subsequent note area without adjusting the immediately preceding note area;

modifying the size of a selected note area, the selected note area including a specific header bar having an associated text heading and an associated sizing button, the size modification performed in response to a sizing gesture made to the associated sizing button;

in response to a down-scroll command received for a given note area having an associated header bar, performing one of the following:

- (a) when the given note area has a subsequent area that is not displayed on the screen and the associated header bar is displayed but is not positioned at an upper portion of the screen, scrolling down and displaying the associated header bar at the upper portion of the screen thereby displaying at least a portion of the subsequent area;
- (b) when the given note area has the subsequent area that is not displayed on the screen and the associated header bar is either displayed positioned at the upper portion of the screen or not displayed, scrolling down and displaying the subsequent area positioned beginning at the upper portion of the screen; and
- (c) when the given note area has no subsequent area not displayed and a subsequent note is available for